Disposal / WEE declaration

Rechargeable Batteries and Batteries

The supplied rechargeable batteries or batteries are recyclable. Please dispose of them at special waste collection points or your local dealer. Only dispose of exhausted batteries or rechargeable batteries to ensure environmental protection.

WEEE-Declaration

Your product is designed and manufactured with materials and components of high quality, which are recyclable and can be reused. The symbol means that your product should be disposed of separately from household waste when it reaches its end of life. Please dispose of this equipment at your local collection point or recycling center. Please help to protect the environment in which we all live.

CE

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PRONOMIC

Pronomic MX-1404FX

Users manual

00024065
Version 01/2012

IMPORTANT SAFETY SYMBOLS

The symbol is used to indicate that some hazardous live terminals are involved within this apparatus, even under the normal operating conditions, which may be sufficient to constitute the risk of electric shock or death.

The symbol is used in the service documentation to indicate that specific component shall be replaced only by the component specified in that documentation for safety reasons.

Protective grounding terminal

Alternating current/voltage

Hazardous live terminal

ON: Denotes the apparatus is turned on

OFF: Denotes the apparatus is turned off.

WARNING: Describes precautions that should be observed to prevent the danger of injury or death to the operator.

CAUTION: Describes precautions that should be observed to prevent danger of the apparatus.

IMPORTANT SAFETY INSTRUCTIONS

- **Read these instructions.**
- **Keep these instructions.**
- **Heed all warning.**
- **Follow all instructions.**
- **Water & Moisture**
  The apparatus should be protected from moisture and rain, can not used near water, for example: near bath-tub, kitchen sink or a swimming pool, etc.
- **Heat**
  The apparatus should be located away from the heat source such as radiators, stoves or other appliances that produce heat.
- **Ventilation**
  Do not block areas of ventilation opening. Failure to do could result in fire. Always install accordance with the manufacturer's instructions.
- **Object and Liquid Entry**
  Objects do not fall into and liquids are not spilled into the inside of the apparatus for safety.
- **Power Cord and Plug**
  Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

  Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety.
  If the provided plug does not fit into your outlet, refer to electrician for replacement.
- **Power Supply**
  The apparatus should be connected to the power supply only of the type as marked on the apparatus or described in the manual. Failure to do could result in damage to the product and possibly the user.
  Unplug this apparatus during lightning storms or when unused for long periods of time.
- **Fuse**
  To prevent the risk of fire and damaging the unit, please use only of the recommended fuse type as described in the manual. Before replacing the fuse, make sure the unit turned off and disconnected from the AC outlet.
- **Electrical Connection**
  Improper electrical wiring may invalidate the product warranty.
- **Cleaning**
  Clean only with a dry cloth. Do not use any solvents such as benzol or alcohol.
- **Servicing**
  Do not implement any servicing other than those means described in the manual. Refer all servicing to qualified service personnel only.
- Only use accessories/attachments or parts recommended by the manufacturer.
- **Warning**
  Please remember the high sound pressure do not only temporarily damage your sense of hearing, but can also cause permanent damage. Be careful to select a suitable volume.

5.SPECIFICATIONS

Mono inputs	
Microphone inputs (XENYX Mic Preamp)	
Type	XLR, electronically balanced, discrete input circuit
Mic E.I.N. (20 Hz - 20 kHz)	
@ 0 Ω source resistance	-134 dB / 135.7 dB A-weighted
@ 50 Ω source resistance	-131 dB / 133.3 dB A-weighted
@ 150 Ω source resistance	-129 dB / 130.5 dB A-weighted
Frequency response	<10 Hz -150 kHz (-1 dB), <10 Hz -200 kHz (-3 dB)
Gain range	+10 to +60 dB
Max. Input level	+12 dBu @ +10 dB gain
Impedance	approx. 2.6 kΩ balanced
Signal-to noise ratio	110 dB / 112 dB A-weighted (0 dBu In @ +22 dB gain)
Distortion (THD+ N)	0.005% / 0.004% A-weighted
Line input	
Type	1/4 " TRS connector, electronically balanced
Impedance	approx. 20 Ω banlanced 10 kΩ unbanlanced
Gain range	-10 to +40 dB
Max. Input level	30 dBu
Fade-out attenuation[1]	
(Crosstalk attenuation)	
Main fader closed	90 dB
Channel muted	89.5 dB
Channel fader closed	89 dB
Frequency response	
Microphone input to main out	
<10 Hz - 90 kHz	+0 dB / -1 dB
<10 Hz - 160 kHz	+0 dB / -3 dB
Stereo inputs	
Type	1/4 " TRS connector, electronically balanced
Impedance	approx. 20 kΩ
Max. Input level	+22 dBu
EQ mono channels	
Low	80 Hz / 15 dB
Mid	2.5 kHz / 15 dB
High	12 kHz / 15 dB
EQ stereo channels	
Low	80 Hz / 15 dB
Mid	2.5 kHz / 15 dB
High	12 kHz / 15 dB
Aux sends	
Type	1/4 " TS connector, unbalanced
Impedance	approx. 20 kΩ
Max.output level	+22 dBu
Stereo aux return	
Type	1/4 " TRS connector, electronically balanced
Impedance	approx. 20 kΩ bal. /10 kΩ unbal.
Max.input level	+22 dBu

Main outputs	
Type	XLR electronically balanced
Impedance	approx. 240 Ω bal./ 120 Ω unbal.
Max.output level	+28 dBu
Control room outputs	
Type	1/4 " TS connector, unbal.
Impedance	approx. 120 Ω
Max.output level	+22 dBu
Headphones output	
Type	1/4 " TRS connector, unbalanced
Max.output level	+19 dBu / 150 Ω (+25 dBu)
DSP	
Converter	24-bit Texas Instruments 24-bit Sigma-Delta. 64/128-times oversampling
Sampling rate	40 kHz
Main mix system data[2]	
Noise	
Main mix @ -∞, Channel fader -∞	-105 dB / -108 dB A-weighted
Main mix @ 0 dB, Channel fader -∞	-95 dB / -97 dB A-weighted
Main mix @ 0 dB, Channel fader @ 0 dB	-82.5 dB / -85 dB A-weighted
Power supply	
Mains voltage	100 -240 V~, 50/60 Hz
Power consumption	40 W
Fuse	100 -240 V~, T 1.6 A H 250V
Mains connection	Standard IEC receptacle
Physical	
1204FX	
Dimensions (H x W x D)	245 x 324 x 86 mm
weight (net)	2.1kg
1404FX	
Dimensions (H x W x D)	298 x 324 x 86 mm
weight (net)	2.3kg
1604FX	
Dimensions (H x W x D)	351 x 324 x 86 mm
weight (net)	2.5kg
1804FX	
Dimensions (H x W x D)	404 x 324 x 86 mm
weight (net)	2.7kg

Measuring conditions:

1: 1kHz rel.to 0 dBu; 20 Hz - 20 kHz, line input; main output; unity gain.

2: 20Hz - 20kHz; measured at main output. Channels 1 - 4 unity gain: EQ flat; all channels on main mix; channels 1/3 as far left as possible, channels 2/4 as far right as possible. Reference = +6 dBu.

LongerdB is constantly striving to manintain the highest professional standards. As a result of these efforts, modifications may be made from time to existing products without prior notice. Specifications and appearance may differ from those listed or illustrated.

4.INSTALLATION

4.1 Rack mounting

The packing of your mixing console contains two 19" rack mount wings which can be installed on the side panels of the console.

Before you can attach the rack mount wings to the mixing console, you need to remove the screws holding the left and right side panels. Use these screws to fasten the two wings onto the console, being careful to note that each wing fits a specific side. With the rack mount wing installed. You can mount the mixing console in a commercially available 19 " rack. Be sure to allow for proper air flow around the unit, and do not place the mixing console close to radiators or power amps. So as to avoid overheating.

☞ **Only use the screws holding the mixing console side panels to fasten the 19 " rack mounts.**

4.2 Cable connections

You will need a larger number of cable for the various connections to and from the console. The illustrations below show. The wing of these cables. Be sure to use only high-grade cable.

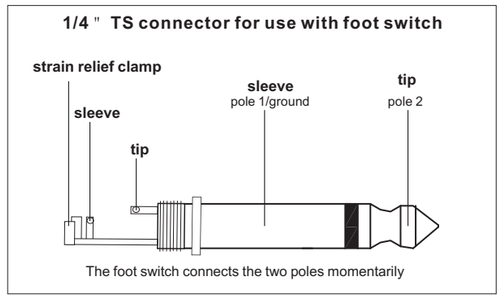

Fig. 4.1: 1/4 " TS connector for foot switch

4.2.1 Audio connections

Please use commercial RCA cables to wire the 2-track inputs and outputs.

You can, of course, also connect unbalanced devices to the balanced input/outputs. Use either mono plugs, or ensure that ring and sleeve are bridged inside the stereo plug (or pins 1 & 3 in the case of XLR connectors).

☞ **Caution! You must never use unbalanced XLR connectors (pin 1 and 3 connected) on the MIC inputs if you in tend to use the phantom power supply.**

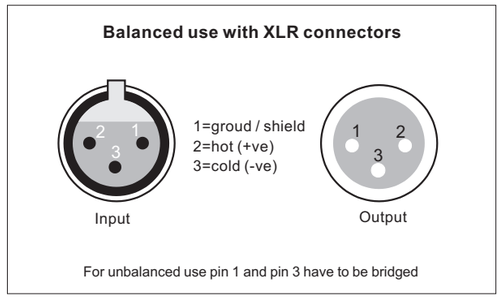

Fig. 4.2: XLR connections

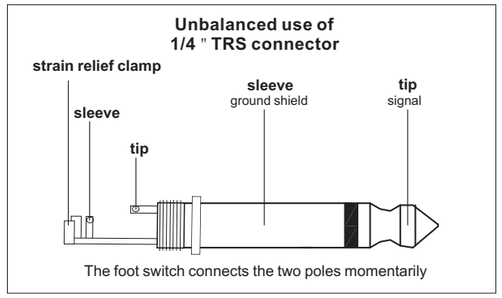

Fig. 4.3: 1/4 " TS connector

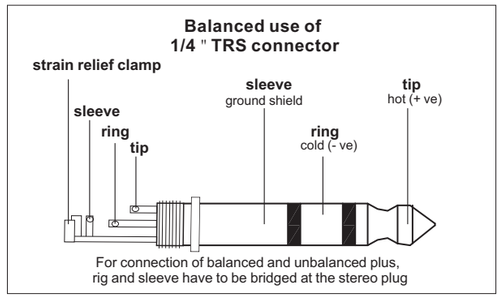

Fig. 4.4: 1/4 " TRS connector

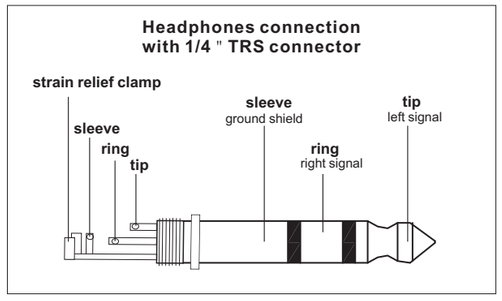

Fig. 4.5: 1/4 " TRS connector for headphones

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1.INTRODUCTION

Congratulations! In purchasing the LONGERDB MX you have acquired a mixer whose small size belies its incredible versatility and audio performance.

The MX Series represents a milestone in the development of mixing console technology. With the new microphone preamps including phantom power as an option. Balanced line input and a powerful effects section. The mixing consoles in the MX Series are optimally equipped for live and studio applications. Owing to state-of-the-art circuitry your MX console produces a warm analog sound that is unrivalled. With the addition of the latest digital technology these base-in-class consoles combine the advantages of both analog and digital technology.

The microphone channels feature high-end Mic Preamps that compare well with costly outboard preamps in terms of sound quality and dynamics and boast the following features.

* 130dB dynamic range for an incredible amount of headroom
* A bandwidth ranging from below 10 Hz to over 200 kHz for crystal-clear reproduction of over the finest nuances
* The extremely low-niose and distortion-free circuitry guarantees absolution natural and transparent signal reproduction
* They are perfectly matched to every conceivable microphone with up to 60 dB gain and +48 volt phantom power supply
* They enable you to use the greatly extended dynamic range of your. 24-bit/192 kHz HD recorder to the full. Thereby maintaining optimal audio quality

"Bitish EQ"

The equalizers used for the MX Series are based on the legendary circuitry of top-notch consoles made in Britain, which are renowned throughout the world for their incredibly warm and musical sound character. Even with extreme gain settings these equalizers ensure outstanding audio quality.

Mutil-effects processor

Additionally, your MX Series mixing consoles has an effects processor with 24-bit A/D and D/A converters included, which gives you 100 presets producing first-class reverb, delay and modulation effects plus numerous multi-effects in excellent audio quality.

The MX Series mixing consoles are equipped with a state-of-the-art switched-mode power supply (**SMPS**). Unlike conventional circuitry an SMPS provides an optimum supply current regardless of the input voltage. And thanks to its considerably higher efficiency a switched-mode power supply uses less energy than conventional power supplies.

USB/Audio interface

The USB interface supplied with the unit is a perfect match for the MX Series and serves as a powerful recording interface to you PC or MAC. It supports the digital transmission of signals on up to four channel with max 48 kHz and extremely low latency. When wired to the CD/TAPE INPUT and OUTPUT connectors,the interface transfers the stereo mix from the console directly to a computer. Both the recording signals and the playback signal from the computer can be monitored at the same time.In this way, you can use several recording runs to produce complete multi-track recordings.

☞ **We should like to draw your attention to the fact that extreme volumes may damage your hearing and/or your headphones or loudspeakers. Turn the MAIN MIX faders and phones control in the main section fully down before you switch on the unit. Always be careful to set the appropriate volume.**

1.1 general mixing console functions

A mixing console fulfils three main functions:

* **Signal processing**: Preamplification, level adjustment, mixing of effects. Frequency equalization.
* **Signal distribution**: Summing of signals to the aux sends for effects processing and monitor mix, distribution to one or several recording tracks, power amp(s), control room and 2-track outputs.
* **Mix:** Setting the volume level, frequency distribution and positioning of the individual signals in the stereo field, level control of the total mix to match the recording devices/ crossover/power amplifier(s). All other mixer functions can be included in this main function.

The interface of LONGERDB mixing consoles is optimized for these tasks enabling you to easily keep track of the signal path.

1.2 The user's manual

The user's manual is designed to give you both an overview of the controls, as well as detailed information on how to use them. In order to help you understand the links between the controls, we have arranged them in groups according to their function.

1.3 Before you get started

1.3.1 Shipment

Your mixing console was carefully packed in the factory to guarantee safe transport. Nevertheless, we recommend that you careful examine the packing and its contents for any signs of physical damage. Which may have occurred during transit.

☞ **If the unit is damaged, please do NOT return it to us, but notify your dealer and the shipping company immediately, otherwise claims for damage or replacement may not be granted.**

1.3.2 Initial operation

Be sure that there is enough space around the unit for cooling purposes and to avoid over-heating please do not place your mixing console on high-temperature devices such as radiators or power amps. The console is connected to the mains via the supplied cable. The console meets the required safety standards. Blown fuses must only be replaced by fuses of the same type and rating.

☞ **Please note that all unit must be properly grounded. For your own safety, you should never remove any ground connectors from electrical devices or power cables, or render them inoperative.**

☞ **Please sure that only qualified people install and operate the mixing console.During installation and operation, the user must have sufficient electrical contact to earth, otherwise electrostatic discharges might affect the operation of the unit.**

2.CONTROL ELEMENTS AND CONNECTORS

This chapter describes the various control elements of your mixing console. All controls, switches and connectors will be discussed in detail.

Use the high-precision quality faders to control the output level of the Alt 3-4 subgroup and main mix.

2.4 Rear view of 1204FX/1404FX/1604FX/1804FX

2.4.1 main mix outputs, Alt 3-4 outputs and control room outputs

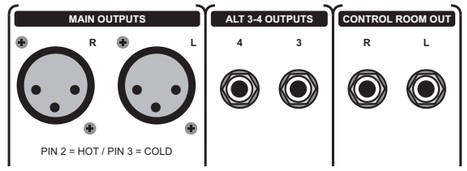

Fig. 2.14 Main mix outputs, Alt 3-4 outputs and control room outputs

MAIN OUTPUTS

The MAIN outputs carry the MAIN MIX signal and are on balanced XLR connectors with a nominal level of +4dBu.

ALT 3-4 OUTPUTS

The ALT 3-4 output are unbalanced and carry the signals of the channels that you have assigned to this group using the MUTE switch. This can be used to route a subgroup to a further mixing console for example, or it could be used as a recording output working in tandem with the main output. This means you could record to four tracks simultaneously. The icing on the cake, so to speak, is that you could connect Y-cables to these four outputs and then connect your 8-track recorder in such a way that you have 2 x 4 tracks. (E.g. Channel 1 feeds track 1and track 2, etc.). In the first recording pass, you record on track 1, 3.5 and 7 and in the second pass, on tracks 2, 4, 6 and 8.

CONTROL ROOM OUTPUT

The control room output is normally connected to the monitor system in the control room and provides the stereo mix or, when required, the solo signal.

2.4.2 Voltage supply, phantom power and fuse

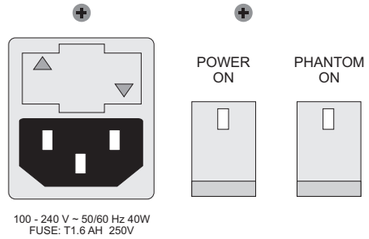

Fig. 2.15: Voltage supply and fuse

FUSE HOLDER

The console is connect to the mains via the cable supplied which meets the required safety standards. blown fuses must only be replaced by fuses of the same type and rating.

IEC MAINS RECEPTACLE

The mains connection is via a cable with IEC mains connector. An appropriate mains cable is supplied with equipment.

POWER

Use the POWER switch to power up the mixing the console.

PHANTOM

The PHANTOM switch activates the phantom power supply for the XLR connectors of the mono channels which is required to operate condenser microphones. The red +48 VLED lights up when phantom power is on. As a rule, dynamic microphones can still be used with phantom power switched on, provided that they are wired in a balanced configuration. In case of doubt, contact the microphone manufacturer!

☞ **After the phantom power supply has been switched on, do not connect microphones to the mixer (or the stagebox/wallbox). Connect the on. In addition, the monitor/PA loudspeakers should be muted before activating the phantom power supply. After switching on, wait approx. One minute to allow the system to Stabilize.**

☞ **Caution! You must never use unbalanced XLR connectors (PIN 1and 3 connected) on the MIC input connectors if you want to use the phantom power supply.**

SERIAL NUMBER

Please note the important information on the serial number given in chapter 1.3.3.

3.DIGITAL EFFECTS PROCESSOR

Fig. 3.1: Digital effects module

24-BIT MULTI-EFFECTS PROCESSOR

Here you can find a list of all presets stored in the multi-effects processor. This built-in effects module produces high-grade standard effects such as reverb, chorus, flanger, delay and various combination effects. The integrated effects module has the advantage of requiring no wiring. This way, the danger of creating ground loops or uneven signal level is eliminated at the outset, completely simplifying the handing.

These effect presets are designed to be added to dry signals. If you move the FX TO MAIN control, you mix the channel signal (dry) and the effect signal.

This also goes for mixing effects signals with the monitor mix. The main difference is that the mix radio is adjusted using the FX TO MON control. Of course, a signal has to be fed into the effects processor via the FX control in the channel strip for both applications.

☞ **On the following page, you will find an illustration showing how to connect your foot switch correctly.**

LEVEL

The LED level mater on the effects module should display a sufficiently high level. Take care to ensure that the clip LED only lights up at peak levels. If it is lit constantly, you are overloading the effects processor and this could cause unpleasant distortion. The FX control (AUX SEND 2) determines the level that reaches the effects module.

PROGRAM

You can select the effect preset by turning the PROGRAM control. The display flashes the number of the current preset. To recall the selected preset, press the button; the flashing stops. You can also recall the selected preset with the foot switch.

2.3.6 Level meter and monitoring

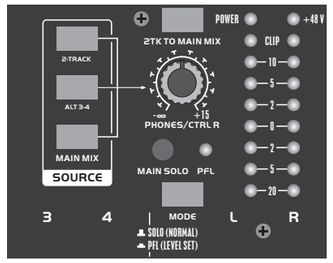

Fig. 2.11: Control room/phones section, level meter

2-TRACK

The TRACK switch routed, the signal from the TRACK IN connectors to the level metre, the CONTROL ROOM OUT outputs and the PHONES connector----this is a simple way to check recorded signals via monitor speakers or headphones.

ALT 3-4

Similarly, the ALT 3-4 switch routes the signal from the Alt 3-4 bus to the same path for monitoring purposes.

MAIN MIX

The MAIN MIX switch sends the main mix signal to the above-mentioned outputs and to the level metre.

PHONES/CTRL (ROOM)

Use this control to set control room output level and headphone volume respectively.

2-TRACK TO MAIN

When the 2-TRACK TO MAIN switch is depressed, the 2-track input is routed to the main thus serves as an additional input for tape machines. You can also connect MIDI further processing. At the same time, this switch disables the main mix to tape output link.

POWER

The blue POWER LED indicates that the device is switched on.

+48V

The red "+48V" LED lights when the phantom power supply is switch on. The phantom power supply is necessary for condenser microphones and is activated using the switch on the rear of the device.

☞ **Please do not connect microphones to the mixer (or the stagebox/wellbox) while the phantom power supply is switched on. Connect microphones before you switch on the power supply. In addition, the monitor/PA loudspeakers, should be muted before you activate the phantom power supply. After switching on, wait approx. One minute to allow for system stabilization.**

LEVEL METER

The high-procision level meter accurately displays the appropriate signal level.

LEVEL SETTING

When recording to a digital device, the recorder' s peak metre should mot exceed 0 dB. This is because, unlike analog recordings, slightly excessive levels can create unpleasant digital distortion.

When recording to an analog device, the VU meters of the recording machine should reach approx. +3 dB with low-frequency signals (e.g. Kick drum). Due to their inertia VU meters tend to display too low a signals level at frequencies above 1 kHz. This is why ,for example, a Hi-Hat should only be driven as far as -10dB. Snare drums should be driven to approx. 0 dB.

☞ **The peak metres of your XENYX display the level virtually independent of frequency. A recording level of 0dB is recommended for all signal types.**

MODE

The MODE switch determines whether the channels' SOLO switch operates as PFL (Pre Fader Listen) or as solo (Solo In Place).

PFL

To activate the PFL function, depress the MODE switch. The PFL function should, as a rule, be used for gain setting purposes. The signal is sourced pre-fader and assigned to the mono PFL bus. In the "PFL" setting, only the left side of the peak meter operates. Drive the individual channels to the 0 dB mark of the VU meter.

SOLO

When the MODE switch is not depressed, the stereo solo bus is activate. Solo is short for "Solo In Place". This is the customary method for listening to an individual signal or to a group of signals. As soon as a solo switch is pressed, all channels in the control room (and headphones) that have not been selected are muted thereby retaining stereo panning. The solo bus can carry the output signals of the channel pan controls, the aux sends and the stereo line inputs. The solo bus is, as a rule, switched post-fader.

☞ **The PAN control in the channel strip offers a constant power characteristic. This means that the signal is always at a constant level, irrespective of its position in the stereo panorama. If the PAN control is moved fully left or right from center, the level increases by 4 dB in that channel. This signal is not louder. For this reason, with the solo function activated (Solo In Place), audio signals from the channels with PAN controls that have not be moved fully to the left or right are displayed at a lower volume that in the PFL function.**

Also a rule, solo signals are monitored via the control room output and headphones connector and are displayed by the level meters. If a also switch is pressed, the signals from the tape input, Alt 3-4 and main mix are blocked from the control room outputs, the headphone connector and the level meter.

MAIN SOLO

The MAIN SOLO LED lights up as soon as a channel or aux send solo switch is pressed. The MODE switch also has to be set at "solo".

PFL

The PFL LED indicates that the peak metre is set to PFL mode.

Fig. 2.12: PHONES connector

PHONES

You can connect headphone to this 1/4 "TRS connector. The signal on the PHONES connection is sourced from the control room output.

2.3.7 Alt 3-4 and main mix fader

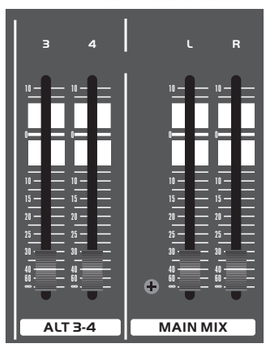

Fig. 2.13: Alt 3-4 and main mix fader

2.1 Mono channels

2.1.1 Microphone and line inputs

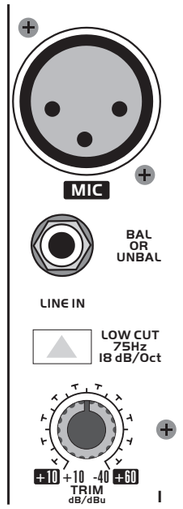

Fig. 2.1: Connectors and controls of mic/line inputs

MIC

Each mono input channel offers a balanced microphone input via the XLR connector and also features switchable +48 V phantom power supply for condenser microphones. The MX preamps provide undistorted and noised-free gain as is typically known only from costly outboard preamps.

☞ **Please mute your play back system before you active the phantom power supply to prevent switch-on thump being directed to your loudspeakers. Please also note the instructions in chapter 2.4.2 "Voltage supply, phantom power and fuse".**

LINEIN

Each mono input also features a balanced line input on a 1/4 " connector . Unbalanced devices (mono jacks) can also be connected to these inputs.

☞ **please remember that you can only use either the microphone or the line input of a channel at any one time. You can never use both simultaneously!**

LOW CUT

The mono channels of the mixing consoles have a high-slope LOW CUT filter for eliminating unwanted, low-frequenty signal components (75 Hz, 18 dB/octave).

TRIM

Use the TRIM control to adjust the input gain. This control should always be turned fully counterclockwise whenever you connect or disconnect a signal source to one of the inputs.

2.1.2 Equalizer

All mono input channels include a 3-band equalizer. All bands provide boost or cut of up to 15 dB. In the central position, the equalizer is inactive.

The circuitry of the British EQs is based on the technology used in the bast-known top-of-the-line consoles and providing a warm sound without any unwanted side effects. The result are extremely musical equalizes which, unlike simple equalizers, cause no side effects such as phase shifting or bandwidth limitation, even with extreme gain settings of ±15 dB.

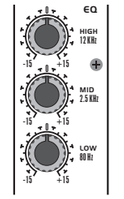

Fig. 2.2: Panorama and routing controls

The upper (HI) and the lower band (LO) are shelving filters that increase or decrease all frequencies above or below their cut-off frequency. The cut-off frequencies of the upper and lower band are 12 kHz and 80 Hz respectively. The mid band is configured as a peak filter with a centre frequency of 2.5kHz

2.1.3 Aux sends

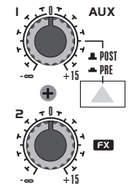

Fig. 2.3: The AUX SEND controls in the channel strips

Aux sends take signals via a control from one or more channels and sum these signals to a so-called bus. This bus signal is sent to an aux send connector and then routed, for example, to an active monitor speaker or an external effects device. The return from an external effect device can then be brought back into the console via the aux return connectors.

For situations which require effects processing, the aux sends are usually switched post-fader so that the effects volume in a channel corresponds to the position of the channel fader. if this were not the channel would remain audible even when the fader is turned to zero. When setting up a monitor mix, the aux sends are generally switched to pre-fader, i.e. they operate independently of the position of the channel fader.

Both aux sends are mono, are sourced after the equalizer and offer up to +15dB gain.

☞ **If you press the MUTE/ALT 3-4 switch, aux send1 is muted, provided that it is switched post-fader. However, this does not affect the aux send 2**

AUX 1 (MON)

Aux send 1 can be switched pre-fader and is thus particularly suitable for setting up monitor mixes.

PRE

When the PRE switch is pressed, aux send 1 is sourced pre-fader.

Aux 2 (FX)

The aux send labeled FX is for sending to effects devices and is thus set up to be post-fader.

☞ **If you wish to use the internal effects processor, the STEREO AUX RETURN 2 connectors should not be is use.**

☞ **You can also connect an external effects processor to aux send 2, however the internal effects module will be muted.**

2.1.4 Routing switch, solo and channel fader

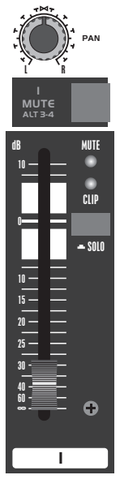

Fig. 2.4: Panorama and routing controls

PAN

The PAN control determines the position of the channel signal within the stereo image. This control features a constant-power characteristic, which means the signal is always maintained at a constant level, irrespective o position in the stereo panorama.

MUTE/ALT 3-4

You can use the MUTE/ALT 3-4 switch to driver the channel from the main mix bus to the Alt 3-4 bus. This mutes the channel from the main mix.

MUTE-LED

The MUTE LED indicates that the relevant channel is diverted to the submix (Alt 3-4 bus).

CLIP-LED

The CLIP LED lights up when the input signal is driver too high. In this case , turn down the TRIM control and, if necessary, check the setting of the channel EQ.

SOLO

The SOLO switch is used to route the channelsignal to the solo bus (Solo In Place) or to the PFL bus (Pre Fader Listen). This enables you to monitor a channel signal without affecting the main output signal. The signal you hear is sourced either before (PFL, mono) or after (solo, stereo) both the pan control and the channel fader (see chapter 2.3.6 “Level meters and monitoring”).

The channel fader determines the level of the channel signal in the main mix (or submix).

2.2 Stereo channels

2.2.1 Channel inputs

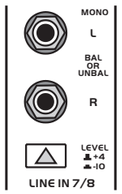

Fig. 2.5: Stereo channel inputs and LEVEL switch

Each stereo channel has two balanced line level input on 1/4 " connectors for left and right channels. If only the connector marked " L " is used, the channel operates in mono. Stereo channels are designed to handle typical line level signals.

Both input can also be used with unbalanced jacks.

LEVEL

For level matching, the stereo inputs feature a LEVEL switch which selects between +4 dBu and -10 dBV. At -10 dBV (home-recording level), the input is more sensitive than at +4 dBu (studio level).

2.2.2 Equalizer stereo channels

The equalizer of the stereo channel is, of course, stereo. The filter characteristics and crossover frequencies are the same as those of the mono channels. A stereo equalizer is always preferable to mono equalizers if frequency correction of a stereo signal is needed. There is often a discrepancy between the settings of the left and the right channels when using separate equalizers.

2.2.3 Aux sends stereo channels

In principle, the aux sends of the stereo channels function in just the same way as those of the mono channels. As aux send paths are always mono, the signal on a stereo channel is first summed to mono before it reaches it reaches the aux bus.

2.2.4 routing switch, solo and channel fader

BAL

The function of the BAL(ANCE) control corresponds to the PAN control in the mono channels.

The balance control determines the relative proportion between the left and right input signals before both signals are routed to the main stereo mix bus.

The MUTE/ALT 3-4 switch, the MUTE-LED, the CLP-LED, the SOLO switch and the channel fader function in the same way as the mono channels.

2.3 Connector panel and main section

Whereas it was useful to trace the signal flow from top to bottom it order to gain an understanding of the channel strips, we now look at the mixing console from left to right. The signals are, so to speaker, collected from the same point on each of the channel strips and then routed to the main section all together.

2.3.1 Aux sends 1 and 2

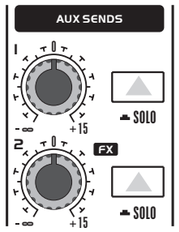

Fig. 2.6: AUX SEND control s of the main section

A channel signal is routed to aux send bus 1 if the Aux 1 control is turned up on the corresponding channel.

AUX SEND 1 (MON)

The AUX SEND control MON acts as master control for aux send 1 and determines the level of the summed signal

AUX SEND 2 (FX)

Similarly, the FX control (AUX SEND 2) determines the level for aux send 2.

SOLO

You can use the SOLO switch to separately monitor the aux sends via the CONTROL ROOM/PHONES outputs and check these with the level metres.

☞ **If you want to monitor the signal the of just one AUX bus, none of the other SOLO SWITCHES should be pressed and the MODE switch must be in the SOLO position (not pressed down).**

2.3.2 Aux send connectors 1 and 2

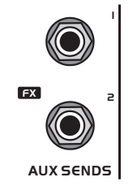

Fig. 2.7: Aux send connectors

AUX SEND 1

If you use aux send 1 pre-fader, you would usually connect the AUX SEND 1connector to monitors via a power amp (or an active monitor system). If you use aux send 1 post-fader,proceed as described under aux send 2.

AUX SEND 2

The AUX SEND 2 connector outputs the signal you picked up from the individual channels using the FX control. You can connect this to the input of an effects mix is created, the processed signal can then be routed from the effects device output back into the STEREO AUX RETURN connectors.

2.3.3 Stereo aux return connectors

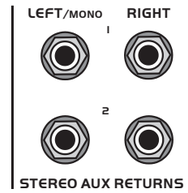

Fig. 2.8: Stereo aux return connectors

STEREO AUX RETURN 1

The STEREO AUX RETURN 1 connectors generally serve as the return path for the effects mix generated using the post-fader aux send. This is where you connect the output signal of the external effects device. If only the connector is used, the AUX RETURN automatically operates in mono.

☞ **You can also use these connectors as additional line inputs.**

STEREO AUX RETURN 2

The STEREO AUX RETURN 2 connectors serve as the return path for the effects mix generated using the FX control. If these connectors already function as additional inputs, you can route the effects signal back into the console via a different channel, with the added benefit that the channel EQ can be used to adjust the frequency of the effects signal.

☞ **In this instance, the FX control of the channel being used as an effects return should be turned fully counterclockwise, otherwise feedback problems could occur!**

☞ **If you wish to use the internal effects processor, no connectors should be plugged into STEREO AUX RETURN 2.**

2.3.4 Stereo aux return

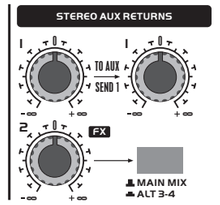

Fig. 2.9: Stereo aux return controls

STEREO AUX RETURN 1

STEREO AUX RETURN 1 is a stereo control which determines is used as effects return, you can add the effects signal to any “dry” channel signal .

☞ **In this instance, the effects device should be set at 100% effect.**

STEREO AUX RETURN MON

The STEREO AUX RETURN MON control has a special function: it can be used to add an effect to a monitor mix. For example:

Monitor mix with effect

In this instance, the effect device should be set up as follows: AUX SEND 2 is connected to the L/Mono input of your effects device, while its outputs are connected to STEREO AUX RETURN 1. Connect the amplifier of your monitor system to AUX SEND 1. The AUX SEND 1 master control determines the volume of the monitor mix.

You can now use the STEREO AUX RETURN MON control to adjust the level of the effects signal routed to the monitor mix.

STEREO AUX RETURN 2 (FX)

The STEREO AUX RETURN 2 control determines the level of signals fed into the AUX RETURN 2 connectors which are routed to the main mix.

MAIN MIX/ALT 3-4

The MAIN MIX/ALT 3-4 switch routes the signal connected to STEREO AUX RETURN 2 to either main mix (not pressed) or submix (Alt 3-4, pressed).

2.3.5 Tape input/tape output

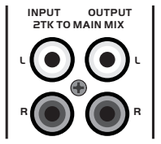

Fig. 2.10: 2-track connectors

2-TRACK INPUT

The 2-TRACK INPUT RCA connectors are provided for connecting a 2 track machine (e.g. DAT recorder). They can also be used as stereo line input. Alternatively, the output signal of a second MX Series Mixing can also be connected. If you connect a hi fi amplifier with a source selection switch to the 2-TRACK INPUT, you can easily switch between additional sources (e.g. Cassette recorder, CD player, etc.).

2-TRACK OUTPUT

These connectors are wired in parallel with MAIN OUT and carry the main mix signal (unbalanced).Connect the 2-TRACK OUTPUT to the inputs of your recording device. The final output level can be adjusted via the high-precision MAIN MIX fader.

☞ **If you connect a compressor or a noise gate after the 2-track output, the faders will probably not be able to create a satisfactory fade-out effect.**